



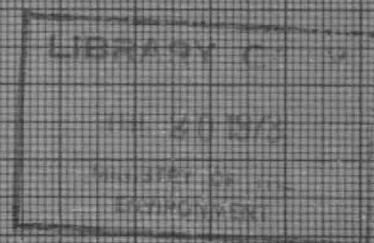
ONTARIO

Ministry of the ENVIRONMENT

TOWN OF THORNBURY

WATER POLLUTION SURVEY UPDATE

SEPTEMBER 1971.



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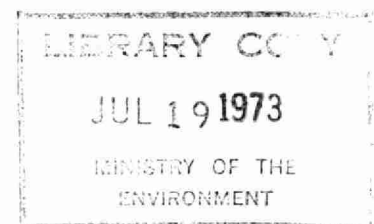
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TOWN OF THORNBURY

WATER POLLUTION SURVEY UPDATE

SEPTEMBER, 1971.



TOWN OF THORNBURY WATER POLLUTION SURVEY UPDATE

The purpose of this brief is to update a previous Water Pollution Survey of the Town of Thornbury carried out in September 1965 by the Division of Sanitary Engineering.

The appendices to this report include a tabulation of the sample results, and a map showing the sampling point locations.

On August 4, 1971, 12 chemical and 13 bacteriological samples were collected from random locations throughout the Town. The chemical samples of the wastes generated by the Georgian Bay Fruit Growers Limited were collected during the operating seasons of 1969 and 1970.

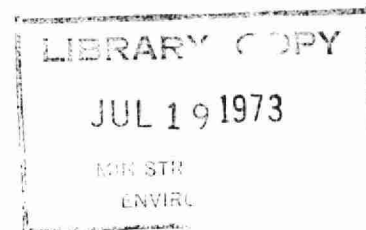
SAMPLE DISCUSSION

Six samples were collected from Little River; four samples above the Thornbury Refuse Disposal Area and two below. Samples Nos. 3 and 4 of this group exhibited the highest coliform bacteria counts, both samples were in excess of the Commission's limit for surface water of 1000 coliform bacteria per 100 ml. The BOD and suspended solids concentration of these samples were acceptable.

The Beaver River was sampled at two locations, one above the main combined sewer outfall south of the Railway Bridge, the other being collected about 200 yards downstream. The downstream sample contained trace amounts of ABS and high bacteria counts in excess of the criterion for recreational purposes. Sample No. 10 collected upstream of the outfall, was high in coliform bacteria.

Since 1926 the Town has been installing storm and sanitary sewers to serve the downtown and business sections of the Town. The outfall for these collector systems lies on the west bank of Beaver River approximately 50 feet south of the railway bridge. Sample No. 9 of this study confirms past reports and studies that report raw sewage as being discharged through this outfall to the Beaver River.

Sample Point No. 7 was at a catch basin on the south west corner of Highway 26 and Elma Street. The sample contained high bacteria counts, BOD, suspended solids and ABS. All these are reliable indicators of domestic sanitary wastes.



Sample Point No. 12 is an industrial sewer connected to, and used by the Georgian Bay Fruit Growers Ltd. The plant is located in the eastern section of Town and processes apples during the late fall and early winter months. Samples of the plant effluent were collected during the canning season of 1969 and 1970. The volume of wastes generated is not known because the effluent was not metered during the above seasons.

GENERAL DISCUSSION

For the purpose of this discussion, the Town of Thornbury shall be divided into three main areas. The first section is the area between Victoria Street and Peel Street in the west end of the Town; the second, lies between Victoria Street and the Beaver River; and the third, is the area east of the Beaver River.

- 1) The western section of the Town is relatively free of pollution and sources of pollution.
- 2) The central section of the Town, between Victoria Street and the Beaver River is serviced by about 2 miles of combined sanitary and storm sewers with one discharging outfall. Approximately 145 commercial and residential establishments use this municipally owned system to dispose of their sanitary wastes.
- 3) The section of Town east of the Beaver River is not serviced by a municipal sewer system. The main source of concern here is the industrial waste generated by the Georgian Bay Fruit Growers Limited. Wastes in excess of 5000 ppm BOD have been recorded in the effluent discharged to Nottawasaga Bay by this industry.

CONCLUSION

As a result of this study and previous surveys conducted in the Town it may be concluded that the western section of Town is relatively free of sources of pollution but there are areas of concern.

The central section of Town is generating domestic sanitary wastes that are collected by a municipal sewer system and hence discharged to Beaver River.

The Georgian Bay Fruit Growers Limited in the eastern section of Town is generating high strength industrial wastes during the apple canning season.

RECOMMENDATIONS

- 1) The Town should provide a municipal sewage collection and disposal system with sufficient capacity to accommodate the industrial wastes generated by the Georgian Bay Fruit Growers Limited.

Prepared by *K. D. Anderson*

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District Engineers Branch,
Division of Sanitary Engineering

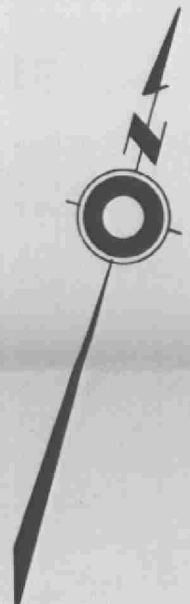
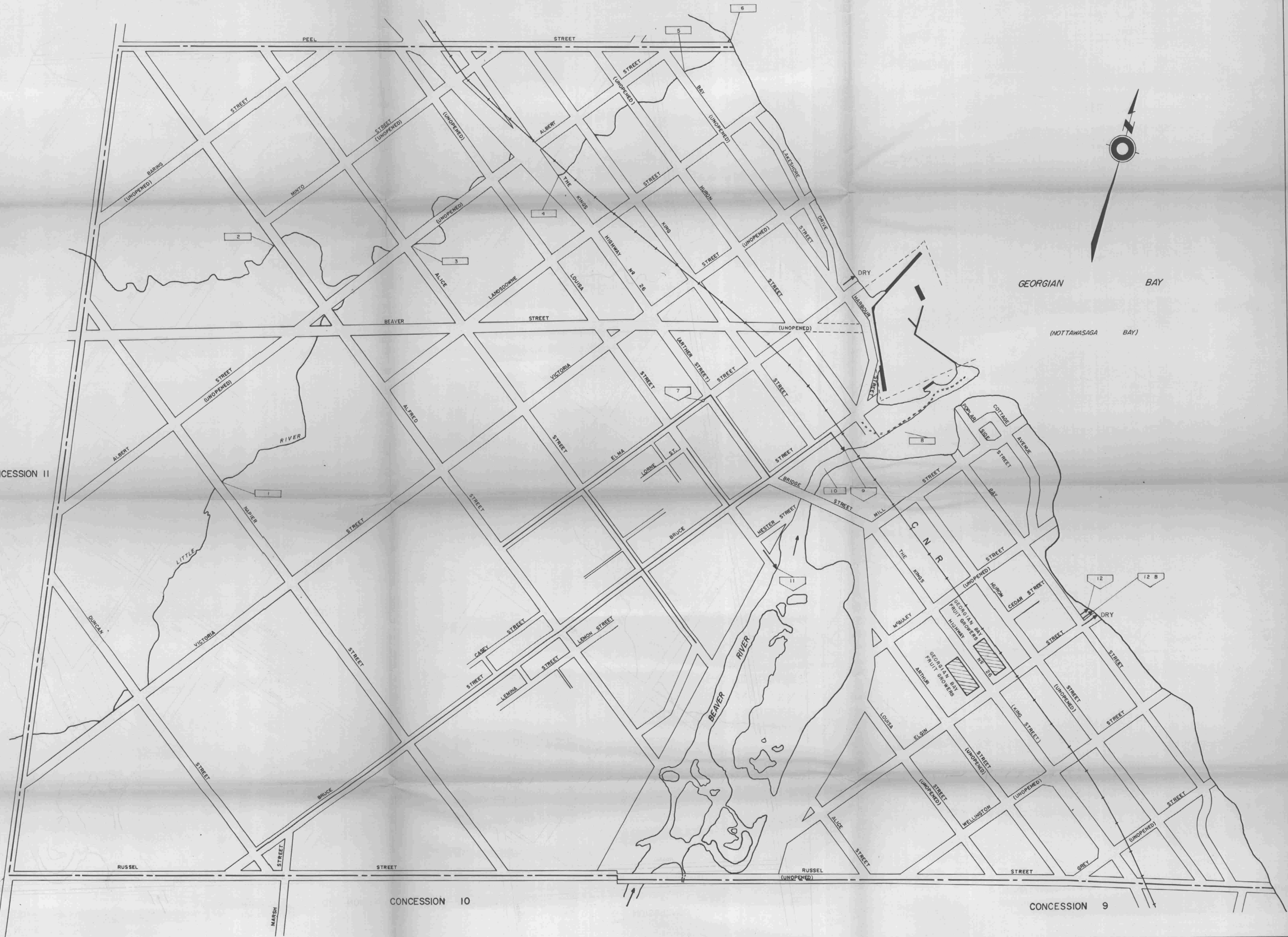
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DATE	SAMPLE POINT	LOCATION	5-DAY BOD	SOLIDS SUSP.	ABS	MEMBRANE FILTER	
						FECAL COLIFORM PER 100 ML	COLIFORM BACTERIA PER 100 ML
AUG. 4, 1971	1	LITTLE RIVER AT NORTH SIDE OF NAPIER ST. BRIDGE.	1.4	5	0.0	60	860
"	2	LITTLE RIVER WEST TRIBUTARY AT ALFRED ST. BRIDGE.	1.2	5	0.0	60	270
"	3	CONFLUENCE OF LITTLE RIVER AND WEST TRIBUTARY AT ALICE STREET BRIDGE.	1.2	5	0.0	40	4,600
"	4	LITTLE RIVER NORTH SIDE OF HIGHWAY #26 BRIDGE.	1.6	5	0.1	10	1,750
"	5	LITTLE RIVER NORTH OF BAY STREET NORTH OF TOWN DUMP.	1.2	5	0.0	90	340
"	6	LITTLE RIVER AT MOUTH OF RIVER IN NOTTAWASAGA BAY	1.0	5	0.0	50	740
"	7	CATCH BASIN SOUTH WEST CORNER OF ELMA STREET & HIGHWAY #26	40.0	55	2.6	2,000	6,900,000
"	8	BEAVER RIVER AT END OF HURON ST.	1.2	5	0.1	900	3,600
"	9	BRUCE ST. STORM & SEWAGE OUTFALL	95	70	10.0	20,000,000	380,000,000
"	10	BEAVER RIVER 300' ABOVE RAILWAY BRIDGE.	1.2	5	0.0	10	2,600
"	11	STORM SEWER OUTFALL END OF LOUISA STREET.	4.0	5	0.6	10	2,600
"	12	SEWER OUTFALL, INDUSTRIAL SEWER END OF ELGIN STREET.	0.6	5	0.1	10	10
"	12B	ASBESTOS CEMENT OUTFALL BELOW NO. 12.	-	-	-	10	90

GEORGIAN BAY FRUIT GROWERS

DATE	SAMPLE POINT	LOCATION	5-DAY BOD	TOTAL	SOLIDS SUSP.	DIS	PL	COD	KJELDAHL NITROGEN AS N	AMMONIA NITROGEN AS N	NITRATE AS N
3/4/71	12	SEWER OUTFALL, INDUSTRIAL END OF ELGIN STREET.	5880	1080	1080	4800					
10/14/70	AT PLANT	WASTE WATER AFTER SCREENING COMPOSITE 7:00 A.M. TO 12:00 NOON.	8000	8,830	1,930	6,400	5.0	12,000			
10/14/70	"	WASTE WATER AFTER SCREENING COMPOSITE 1:00 P.M. TO 6:00 P.M.	12,000	13,280	7,480	5,800	4.7	12,000	60	0.19	.01
10/14/70	"	WASTE WATER AFTER SCREENING COMPOSITE 6:00 TO 12 MID.	5,500	6,370	1,050	5,320	4.9	8,000			
10/14/70	"	WASTE WATER AFTER SCREENING 12 MID. TO 1:30 A.M. 10/15/70	3,200	4,740	775	3,970	5.9	5,900			
1/19/70	12	SEWER OUTFALL, INDUSTRIAL, END OF ELGIN STREET.	31	690	230	460	7.5		11	2.9	.05
1/12/70	"	"	460	1830	1190	640	6.1				
10/10/69	"	"	30	330	20	310	7.4			1.0	.02
10/10/69	"	"	8,000	17,360	10,670	16,690	4.1		50	1.0	.03

CONCESSION 11



GEORGIAN BAY
(NOTTAWASAGA BAY)

VILLAGE OF CLARKSBURG

TOWNSHIP OF COLLINGWOOD

LEGEND

- 6 - SAMPLING POINT
- 12 - OUTFALL
- - - - - SANITARY SEWER

ONTARIO WATER RESOURCES COMMISSION	
TOWN OF THORNBURY	
WATER POLLUTION SURVEY	
1971	
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